

What is claimed is:

1. A polyester combined filament yarn composed of a self-extending polyester multifilament yarn A and a heat-shrinkable polyester multifilament yarn B, the polyester combined filament yarn being characterized in that the polyester multifilament yarn A comprises a core portion and a plurality of fin portions protruding in a radial fashion from the core portion along the lengthwise direction of the core portion, and in that the following conditions (a) to (c) are simultaneously satisfied.

$$(a) \frac{1}{20} \leq S_B/S_A \leq \frac{1}{3}$$

$$(b) 0.6 \leq L_B/D_A \leq 3.0$$

$$(c) W_B/D_A \leq 1/4$$

(where  $S_A$  represents the cross-sectional area of the core portion,  $D_A$  represents the diameter of the core portion when the cross-section is a circle and the circumscribed circle diameter when it is not a circle, and  $S_B$ ,  $L_B$  and  $W_B$  represent the cross-sectional area, maximum length and maximum width, respectively, of the fin portions.)

2. A process for production of a polyester combined filament yarn according to claim 1, characterized in that heat-shrinkable polyester multifilament yarn B' is paralleled with multifilament yarn A' which becomes the self-extending polyester multifilament yarn A when subjected to relaxation heat treatment, and after supplying them to an interlacing nozzle with an overfeed for interlacing, heat relaxation treatment is carried out to impart a self-extending property to the polyester multifilament yarn A', prior to a second relaxation heat treatment with a non-contact heater.

3. A process for production of a polyester combined filament yarn according to claim 2, wherein the relaxation heat treatment for imparting the self-extending property is

carried out on a heated roll at 100-130°C.

4. A process for production of a polyester combined filament yarn according to claim 2, wherein the polyester multifilament yarn A' and polyester multifilament yarn B' are paralleled and supplied to the interlacing nozzle at an overfeed rate of 1.0-1.5%.

5. A process for production of a polyester combined filament yarn according to claim 4, wherein interlacing is introduced at 50-90/m in the interlacing nozzle.

6. A process for production of a polyester combined filament yarn according to claim 2, wherein the second relaxation heat treatment is carried out at 210-240°C at an overfeed rate of 1.5-2.5%.